Amendments to the Claims

The listing of claims below replaces all prior versions and listings of claims.

Listing of Claims

Claim 1 (Previously Presented): In an ad-hoc communication network in which terminals may belong to more than one piconet, a method of modifying the allocation of a terminal's capacity between two or more networks, comprising the steps of:

receiving, in a first terminal communicating in a first ad-hoc network, a request from a second terminal to modify the first terminal's capacity allocation to communicate in a second ad-hoc network with at least the second terminal;

determining whether the first terminal has sufficient available capacity to accommodate the request; and

if the available capacity is sufficient, then comparing the capacity allocation of the first terminal to the capacity allocation of the second terminal to determine mutually acceptable capacity blocks allocable to satisfy the request.

Claim 2 (Original): A method according to claim 1, wherein:

the request from the second terminal includes a parameter that represents the priority class of a desired capacity allocation; and

the step of determining whether the first terminal has sufficient available capacity includes capacity allocated by the first terminal to priority classes lower than the priority class parameter in the request from the second terminal.

Claim 3 (Original): A method according to claim 1, wherein:

the request from the second terminal includes a parameter that represents the priority class of a desired capacity allocation; and

the step of determining whether the first terminal has sufficient available capacity includes capacity allocated by the first terminal to priority classes equal to and lower than the priority class parameter in the request from the second terminal.

Claim 4 (Original): A method according to claim 1, wherein:

if the first terminal does not have sufficient capacity available, then the first terminal transmits to the second terminal a data messaging indicating rejecting the request.

Claim 5 (Previously Presented): In an ad-hoc communication network in which terminals may belong to more than one piconet, a method of modifying the allocation of a terminal's capacity between two or more networks, comprising the steps of:

receiving, in a first terminal, a request from a second terminal to modify the first terminal's capacity allocation;

determining whether the first terminal has sufficient available capacity to accommodate the request; and

if the available capacity is sufficient, then comparing the capacity allocation of the first terminal to the capacity allocation of the second terminal to determine mutually acceptable capacity blocks allocable to satisfy the request,

wherein the step of comparing the capacity allocation of the first terminal to the capacity allocation of the second terminal to determine mutually acceptable capacity blocks allocable to satisfy the request comprises:

creating a first digital representation of the first terminal's capacity allocation in a first domain;

creating a second digital representation of the second terminal's capacity allocation in the first domain; and

comparing the first and second digital representations to determine mutually acceptable capacity blocks.

Claim 6 (Original): A method according to claim 1, further comprising the step of:

modifying the first terminal's capacity allocation to accommodate the request from the second terminal.

Claim 7 (Original): A method according to claim 6, further comprising the step of:

transmitting a data message from the first terminal to the second terminal indicating that the request has been accommodated.

Claim 8 (Original): A method according to claim 7, further comprising the step of:

transmitting a data message from the first terminal to a third terminal, the data message including information representative of the first terminal's modified capacity allocation.

Claim 9 (Previously Presented): In an ad-hoc communication network comprising a plurality of Bluetooth units adapted to allocate capacity between at least two different piconets, a method of modifying a terminal's capacity allocation between a first piconet and a second piconet, comprising the steps of:

receiving, in a first terminal communicating in the first piconet, a request from a second terminal to modify the first terminal's capacity allocation to communicate in a second piconet with at least the second terminal , the request including a digital representation of the second terminal's capacity allocation;

determining whether the first terminal has sufficient available capacity to accommodate the request; and

if the first terminal's available capacity is sufficient, then comparing the capacity allocation of the first terminal to the capacity allocation of the second terminal to determine mutually acceptable capacity blocks allocable to satisfy the request.

Claim 10 (Currently Amended): A capacity allocation module for a first communication terminal, comprising

a communication module for communicating in a first ad-hoc network and for receiving a request from a second communication terminal to modify the first terminal's capacity allocation to communicate in a second ad-hoc network with at

least the second terminal, the request including a digital representation of the second terminal's capacity allocation;

a memory module for storing a digital representation of the first terminal's capacity allocation; and

a processor module operative associated with the memory module for comparing the first terminal's capacity allocation with the second terminal's capacity allocation to determine mutually acceptable capacity blocks allocable to satisfy the request.

Claim 11 (Currently Amended): A capacity allocation module for a first communication terminal, comprising:

a communication module for receiving a request from a second communication terminal to modify the first terminal's capacity allocation, the request including a digital representation of the second terminal's capacity allocation;
a memory module for storing a digital representation of the first terminal's capacity allocation; and

a processor module operative associated with the memory module for comparing the first terminal's capacity allocation with the second terminal's capacity allocation to determine mutually acceptable capacity blocks allocable to satisfy the request,

wherein the digital representation of the first terminal's capacity allocation comprises a first array of binary digits, wherein each element of the array represents a time slot in the terminal's capacity allocation, and wherein a binary "1" represents a free time slot;

the digital representation of the second terminal's capacity allocation comprises a second array of binary digits, wherein each element of the array represents a time slot in the terminal's capacity allocation, and wherein a binary "1" represents a free time slot; and

wherein the processor performs a bit-wise binary AND function on the first array and second array to determine mutually acceptable capacity blocks.

Claim 12 (Previously Presented): A method according to claim 1, further comprising:

receiving, in the first terminal, a request from at least one additional terminal to modify the first terminal's capacity allocation to communicate in at least one additional ad-hoc network;

determining whether the first terminal has sufficient available capacity to accommodate the request; and

if the available capacity is sufficient, then comparing the capacity allocation of the first terminal to the capacity allocation of the at least one additional terminal to determine mutually acceptable capacity blocks allocable to satisfy the request.

Claim 13 (Previously Presented): A method according to claim 9, further comprising:

receiving, in the first terminal, a request from at least one additional terminal to modify the first terminal's capacity allocation to communicate in at least one additional piconet;

determining whether the first terminal has sufficient available capacity to accommodate the request; and

if the available capacity is sufficient, then comparing the capacity allocation of the first terminal to the capacity allocation of the at least one additional terminal to determine mutually acceptable capacity blocks allocable to satisfy the request.

Claim 14 (Currently Amended): A capacity allocation module according to claim 10, wherein:

the communication module is also for receiving a request from at least one additional terminal to modify the first terminal's capacity allocation to communicate in at least one additional ad-hoc network, the request including a digital representation of the at least one additional terminal's capacity allocation[[;]]

~~a memory module for storing a digital representation of the first terminal's capacity allocation;~~

~~a processor module operative associated with the memory module for comparing the first terminal's capacity allocation with the at least one additional~~

~~terminal's capacity allocation to determine mutually acceptable capacity blocks allocable to satisfy the request~~.